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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/039, 072	03/13/98	SASAKI	A P/1878-109

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WM02/1207

EXAMINER

GRIER, L

ART UNIT

PAPER NUMBER

2644

DATE MAILED:

12/07/00

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Regards,  
Laura A. Drei  
(703) 306-4819

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/039,072	SASAKI, ATSUSHI	
	Examiner Laura A Grier	Art Unit 2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on \_\_\_\_\_.

2a) This action is **FINAL**.                  2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-9 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-9 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved.

12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. § 119

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

#### Attachment(s)

15) Notice of References Cited (PTO-892)

16) Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.

18) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_

19) Notice of Informal Patent Application (PTO-152)

20) Other: \_\_\_\_\_

**DETAILED ACTION**

***Specification***

***Abstract***

1. The abstract of the disclosure is objected to because of the phrase "the present invention". The examiner suggests that the paragraph begins as follows: "A loudspeaker unit...". Correction is required. See MPEP § 608.01(b).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umemoto et al. (U. S. Patent No. 5636323) in view of Satoh et al. (U. S. Patent No. 5146507).**

Regarding **claim 1**, Umemoto et al. discloses a speech communication apparatus having an echo canceler. Umemoto et al. disclosure includes a microphone (figure 1- reference 14); a digital signal processor/echo canceler (figure 1-reference 30), which reads on a processing means for comparing; an speech amplifier (figure 1- reference 12); and a loudspeaker (figure 1-reference 13). However, Umemoto et al. fails to specifically disclose a processing means for comparing in regards to frequency

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characteristics. The examiner maintains that disclosing processing means relevant to frequency characteristics was well known in the art, as taught by Satoh et al.

Regarding the processing means relating to frequency characteristics, in a similar field of endeavor, Satoh et al. discloses an audio reproduction characteristics control device. Satoh et al. disclosure includes the processing of frequency characteristics correction parameters (column 3-summary of invention).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Umemoto et al. by including the processing means of frequency characteristics with other comparing factors (echo or reverberation) to effectively enhance the output on a loudspeaker in a given environment.

Regarding **claim 2**, Umemoto et al. and Satoh et al. disclose everything claimed as applied above (see claim 1). Umemoto et al. further discloses in figure 1 an A/D converter (reference 21); a memory (figure 2- reference 37); another A/D converter (figure 1-reference 16); a coefficient calculation circuit (figure 2-reference 33), which reads on a comparison analysis; a coefficient updating subtracter (figure 2-reference 38), which reads on the means of regenerative signal processing; a D/A converter (figure 1-reference 11).

Regarding **claim 3**, Umemoto et al. and Satoh et al. disclose everything claimed as applied above (see claim 2). Umemoto et al. further discloses a coefficient calculation circuit (reference 33 and column 6, lines 6-18), which depicts means of comparison analysis feedback output having a fixed value or 0.

Regarding **claim 4**, Umemoto et al. and Satoh et al. disclose everything claimed as applied above (see claim 1). Umemoto et al. further discloses a digital signal processor/echo cancer (figure 2 and 3 and column 5, line 24 – column 6) in which the arithmetic means are inherently taught.

Regarding **claim 5**, Umemoto et al. and Satoh et al. disclose everything claimed as applied above (see claim 2). Umemoto et al. further discloses a digital signal processor/echo cancer (figure 2 and 3 and column 5, line 24 – column 6) in which the arithmetic means are inherently taught.

Regarding **claim 6**, Umemoto et al. and Satoh et al. disclose everything claimed as applied above (see claim 1). Further, Umemoto et al. inherently discloses means of comparing the characteristics intermittently (column 6, lines 41-43).

Regarding **claim 7**, Umemoto et al. and Satoh et al. disclose everything claimed as applied above (see claim 2). Further, Umemoto et al. inherently discloses means of comparing the characteristics intermittently (column 6, lines 41-43).

Regarding **claim 8**, Umemoto et al. and Satoh et al. disclose everything claimed as applied above (see claim 4). Further, Umemoto et al. inherently discloses means of comparing the characteristics intermittently (column 6, lines 41-43).

Regarding **claim 9**, Umemoto et al. and Satoh et al. disclose everything claimed as applied above (see claim 5). Further, Umemoto et al. inherently discloses means of comparing the characteristics intermittently (column 6, lines 41-43).

### ***Conclusion***

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura A Grier whose telephone number is (703) 306-4819. The examiner can normally be reached on 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-6306 for regular communications and (703) 308-6306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

LAG *LAG*  
November 24, 2000



FORESTER W. ISEN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2700